



BECOMING A DESIGN-DRIVEN ORGANIZATION

CASE STUDY ON DESIGN TRANSFORMATION IN A NORDIC ENERGY COMPANY

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ABSTRACT

This master's dissertation aims to examine practices that enable or disable the implementation of design thinking in an organization. Design thinking as a concept has recently gained popularity in both academic and business environments, especially since the 2010s. Many organizations are adopting design thinking tools in various activities ranging from innovation and product development to customer and employee experience, as well as in internationalization efforts.

In this study, an organization in the energy sector is scrutinized. The research question is: *Which practices enable or disable the adoption of design thinking in an organization?* Previously, it has been shown that processes related to internal communication and legitimization, creation of physical spaces and sharing of internal success stories are crucial. Also, the importance of clear management communication, autonomy of the design function as well as co-existence of both deep and wide design expertise has been suggested.

This study, in turn, applies the practice theory lens, which directs the research interest to the practices that the organizational actors take in their everyday work activities. The study is conducted with a narrative approach: the stories told by the members of the organization are analyzed. Rather than producing broadly generalizable knowledge, the eight, thematic narrative interviews provide the study with a wealth of rich, contextual understanding. The results are presented through narrative writing: based on the identified practices, three fictional stories are constructed, by each respondent type (design manager, design team member, member of a business division).

The results indicate that practices related to increasing design expertise among employees, initiating small pioneer projects, and integrating design terminology with business terminology are the most important enabling practices. On the other hand, practices related to quasi-use of design tools, prioritizing short-term profits at the expense of proper design process, and usage of unreliable facilities in design activities are the most important prohibiting practices. The contribution to existing research is threefold: this study advances the research on how individual companies adopt design thinking in their organization, practice approach enriches the knowledge on design transformations, and finally, a case organization in the less explored energy sector is scrutinized.

Keywords

Design thinking, Design transformation, Practice research, Narrative research

TIIVISTELMÄ

Tämän pro gradun tavoitteena on tarkastella käytäntöjä, jotka mahdollistavat tai estävät design-ajattelun omaksumista organisaatiossa. Design-ajattelu on saavuttanut suosiota sekä akateemisella kentällä että yritysympäristöissä, etenkin 2010-luvulta lähtien. Monet organisaatiot ottavat käyttöön design-ajattelun työkaluja erilaisissa toiminnoissa aina innovaatiotoiminnasta ja tuotekehityksestä asiakas- ja työntekijäkokemukseen sekä kansainvälistymispyrkimyksiin.

Tässä tutkimuksessa tarkastellaan designin ilmenemistä energia-alan organisaatiossa. Tutkimuskysymys on: *mitkä käytännöt mahdollistavat tai estävät design-ajattelun omaksumista organisaatiossa?* Aiemmin on osoitettu, että sisäiseen viestintään ja legitimointiin liittyvät prosessit, fyysisten työskentelytilojen luominen ja sisäisten menestystarinoiden jakaminen ovat omaksumisen kannalta tärkeitä. Lisäksi on painotettu selkeän johtamisviestinnän merkitystä, design-funktion autonomiaa sekä syvän ja laajan design-osaamisen rinnakkaiselo.

Tässä tutkimuksessa sovelletaan käytäntöteoreettista linssiä, joka suuntaa tutkimuksellisen kiinnostuksen niihin käytäntöihin, joita organisaation toimijoiden välillä päivittäisessä työssä vallitsee. Tutkimus toteutetaan narratiivisella otteella: erityisenä mielenkiinnon ja analyysin kohteena ovat organisaation jäsenten kertomat tarinat. Kahdeksan kerronnallista teemahaastattelua tarjoavat tutkimukselle runsaasti kontekstuaalista ymmärrystä. Tulokset esitellään narratiivisen ilmaisutavan avulla: tunnistettujen käytäntöjen pohjalta rakennetaan kolme fiktiivistä tarinaa kunkin vastaaja-tyypin (design-tiimin johtaja, design-tiimin jäsen, liiketoimintadivisioonan jäsen) mukaan.

Tutkimuksen tulokset osoittavat, että case-organisaatiossa tärkeimpiä mahdollistavia käytäntöjä ovat työntekijöiden design-osaamisen lisäämiseen liittyvät käytännöt, pienten pioneeriprojektien käynnistäminen sekä design-terminologian integrointi liiketoimintaterminologiaan. Toisaalta design-työkalujen näennäiseen käyttöön liittyvät käytännöt, lyhytaikaisten voittojen priorisointi kunnollisen design-prosessin kustannuksella sekä epäluotettavien tilojen käyttö design-toiminnassa ovat tärkeimpiä estäviä käytäntöjä. Kontribuutio olemassa olevaan tutkimukseen on kolmiosainen: tutkimus edistää tutkimusta siitä, kuinka yksittäiset yritykset omaksuvat design-ajattelua; toisekseen käytäntöteoreettinen lähestymistapa rikastuttaa tietoa design-transformaatioista ja lisäksi tutkimuksen case-organisaatio toimii vähemmän tarkastellulla energiasektorilla.

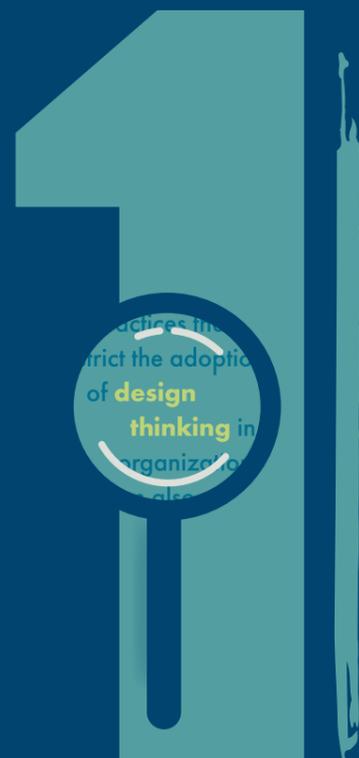
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Design-ajattelu, Design-transformaatio, Käytäntöteoria, Narratiivinen tutkimus

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INTRODUCTION



1.1 Motivation – Design thinking seems to be everywhere

Design thinking, a process and toolkit for innovation and business challenges, has recently attracted a lot of interest among organizational and management researchers as well as business practitioners (see Martin 2009; Liedtka 2015; Björklund et al., 2019). The concept has been lately featured repeatedly in several leading publications, such as *The Economist*, *The Wall Street Journal* and in academic journals such as *Academy of Management Journal* (Engberts & Borgman, 2018). It has been argued that the prevailing strategy tools may have failed to meet the needs of organizations with engaging people and users in development processes (Moisander & Stenfors, 2009). Therefore, a growing number of companies adopt design thinking practices to increase the customer centricity of their products and services, and to create better brand recognition and customer loyalty (Elsbach & Stigliani 2018). These actions are expected to improve the success of the companies in the internationalizing market of the global economy (da Silva et al, 2021). Interestingly, companies that use design thinking extensively have produced better returns for shareholders in the stock market than non-design-intensive companies (Westcott et al., 2013).

In this study, I examine the practices that enable and/or restrict the adoption of design thinking in the organization. In this way, I am also scrutinizing if and how my case organization is transforming to a design-driven organization. Therefore, the concept of design thinking (later DT) will be discussed in the organizational context, as a management concept. It has been shown that organizations invest significant amounts of resources in the implementation and adoption of such concepts (Radaelli & Sitton- Kent, 2016). In terms of adopting DT in the organization, it has previously been identified that a wide range of efforts regarding internal communication and legitimization, creation of physical spaces and sharing of internal success stories are crucial (Rauth, 2014). Also, the importance of clear management communication and autonomy of the design function as well as modification of organizational processes has been identified (Micheli, Perks, & Beverland, 2018). Co-existence of both deep and wide design expertise as a key to adoption has also been suggested (Björklund, Maula, Soule, & Maula, 2020).

My study, in turn, contributes to the existing research by approaching the adoption of DT in an organization with a practice lens. Practice-based research focuses on everyday doings and recurring actions as the building blocks of organizational reality and change (Feldman & Orlikowski, 2011). Through practice-based approach and narrative research methods, this study focuses on an organization in the energy industry and seeks what kind of practices enable or disable its adoption in the organization. The company under research, is adopting some of the elements of DT in its product and service development as well as internationalization processes and is therefore an interesting case organization for the study.

This topic is immensely interesting to me as a researcher. To me, DT holds some of the most inspiring attitudes within current management and organizational research. During recent years, I have experienced the potential, possibilities, and the variety of use cases of DT from both academic and professional angles. In terms of DT and management science, I have been intrigued by the ideation and innovation related tools DT can bring to an organization. Furthermore, the possibilities of the human-centered orientation of DT, regarding leadership, e.g., to create better employee experiences, are compelling. In professional life and especially through my work at a design agency, I have been able to see how small and medium sized companies from Northern Finland benefit from the tools of DT. To many client organizations that I have worked with, the importance of deep user understanding, and iterative testing become evident especially when creating new products and services. To my experience, these simple tasks reduce the time companies need to spend to be able to take their new offerings to the international market.

And that's how my thoughts started to refine, and the inspiration ignited. If DT is a valuable toolkit for organizations, how can more and more companies adopt it? Of course, I cannot be the first person in the world to think about these things, so what does the previous research say about the topic? What kind of application possibilities are there generally in DT in the organizational context? If there's an ongoing case somewhere in an organization that is adopting DT, I want to learn more about what they are doing. In case there are real-life notions from a company that is now going through a design transformation, what can we learn from them? Could DT also help companies seeking international growth? These questions made me interested in the subject.

This paper unfolds as follows. It will begin with a more detailed look on how the research problem is formed. Then, the research context is further introduced, and the keywords of this research are defined along with explanation of the research objectives and key questions. On chapter two, the previous literature across the boundaries of design thinking and management & organizational studies, will be discussed. There, it is evaluated how design thinking can be applied in an organization and how the maturity of an organization in terms of design can be measured. Then, I will move onto my research lens, practice research, and why it matters. In chapter three, there is a detailed look on the research methodology chosen for this research. It includes description on how I conducted the research interviews there and how the results were analyzed. Also, the questions of how and why the results are represented in a narrative format.

In chapter four, there is a more detailed description about the case organization which is attempting to adopt design thinking in their company. Then, a deep dive will be performed into the case organization through narratives of three fictive people, Martine, Mike, and Inge, which are constructed out of the three respondent categories of the interviews (design manager, member of the design team, member of a business unit). Through the narratives, their perceived reality on the course of events in the company, can be experienced immersively. In the final chapter, the core findings are summarized and reflected to the previous studies. The study is concluded with the evaluation of the researcher's own thought process, reflection of the results with previous research as well as topics for further research.

1.2 Research objectives and research context

In this study, the main research objective is to recognize practices that help an organization utilize design thinking at various levels, areas, and processes. While seeking the enabling practices, I also want to recognize practices that disable or prohibit the utilization of DT.

As Björklund et al. (2020) suggest, companies led by design are driven by the belief that design and design thinking are the foundation of value generation and sustainable competitive

advantage. Design and design thinking are embedded throughout most of these companies' practices. Björklund et al. (2020) call such organizations *design-driven*: design practices at these companies are infused throughout the entire organization. These companies, for example, define problems through design and facilitate co-creation between stakeholders and learn through experimentation. Also, Bucolo et al. (2012) suggested that a company seeking to enable design thinking as a cultural transformation process within a business, could be called a design-led company.

My research is a narrative study which means the special focus is on the narratives people in the organization tell of their reality. The research setting consists of one company, an organization in the energy industry that is, according to some of its employees, adopting the principles of design thinking in its operations. In this study, I examine what kinds of doings and actions are related to design and how these doings form practices i.e., the ways of actions related to the use of DT. Accordingly, my research question is as follows:

Which practices enable or disable an organization to adopt design thinking?

Before heading into the study, it is appropriate to state the keywords of the research which will be explained in the next chapter:

- **Design, Design thinking (later DT)**
- **Design as an organizational asset; Design maturity**
- **Organizational transformation; Design transformation**
- **Practice research; Design-as-practice**
- **Narrative research, Narrative writing**

1.3 Acknowledgements and funding

Before we head into the research, let me first thank the Finnish Foreign Trade Promotion Fund (SUE) for the grant secured for this research. The fund, formed under the Finnish Ministry of Foreign Affairs, aims to support dissertations at the University of Lapland that bring valuable information to the Finnish economic life, especially with internationalization and export-related themes. I am extremely grateful for the grant as a novice researcher. The grant is a valuable accolade also to the whole topic and it shows that the value and possibilities of design thinking for Finnish companies are recognized.

I express my greatest gratitude to Dr Pikka-Maaria Laine, for the continuous guidance and help through the thesis process. Big thanks go to Ulla Jones for helping me find a suitable case organization. Also, support from my employee organization, Arctic Factory, has been valuable through the process. Graphic designer Henna Huotari is honored for the visual identity and appearance of this dissertation. Very special thanks go to the people of the company under research, which will remain anonymous for the time being. Throughout the research process, the company representatives were easy to work with and highly open to the research.



PREVIOUS RESEARCH

2.1 From design to design thinking

During recent decades, design as a concept has significantly broadened and evolved over its previous definition. Design has been traditionally understood as aesthetics, visual appearance, and external form of a product, but the principles of design have since outgrown their traditional context (Starostka, 2014). The first mentions of design thinking date back to the 1990s, when Buchanan (1992) proclaimed design thinking as a tool not only for craft and industrial production, but rather a tool for solving wicked problems or problems that are difficult to solve because of incomplete, contradictory, and changing requirements. She viewed design as a liberal art and as a means to design many kinds of things on top of complex human problems.

Two main discourses within the research of DT can be distinguished (Johansson Sköldb-berg, Woodilla, & Çetinkaya, 2013). The first one is called the “design discourse” which encompasses the studies on the way professional designers work and think, i.e., the designerly way of working. Theories surrounding the analytical interpretation and characterization of the designers’ non-verbal competence are discussed. This discourse has an academic research background of roughly 60 years. The other stream is the “management discourse in relation to design”, which discusses the possibilities of DT in creating value and innovation, usually in organizational and business contexts. An integral feature of this discourse is that design practice and competency are used outside the design context, particularly with people who do not have a scholarly background in design. The management discourse in relation to design is a more recent stream – the first mentions date back to the early 2000s. In my study, I draw from both discourses.

As Cooper et al. (2009) argue, the term “design thinking” is generally used to refer to applying the sensibility and methods of a designer to any kind of problem solving. The purpose of DT is not to replace professional design or the art and craft of designing, but rather to enable innovative thinking. DT is usually thought of as a process, consisting of five stages: empathizing, defining, ideating, prototyping, and testing (Brown, 2009). In the definition, empathizing is defined as direct interaction with users. This actualizes in examining people’s needs, fears, hopes

and their behavior and other factors influencing their experienced reality. In the defining stage, the actual problem that should be solved is refined or redefined. After finding what's desirable to solve, the design process continues into examining what is actually feasible and viable. Next, in the ideation phase, several solutions are generated and brainstormed, while in the prototyping phase, demos or early versions of the best possible final solutions are developed rapidly. As a final step, the test phase sees active testing of the developed prototypes with potential end-users and related people. The test phase leads the way to the final implementation.

The DT process is often visualized (see Figure 1) in the form of the “double diamond” (British Design Council, 2005). The model consists of two “diamonds”, representing the two distinctive phases: the problem defining phase and the solution creating phase. The model is divided into four sections: (1) “Discover”, for seeking a new understanding of the problem to be solved, (2) “Define”, for defining and crystallizing the understanding already obtained, (3) “Develop”, for developing new concepts, which are prototyped and tested and (4) “Deliver”, where the concept is crystallized, implemented, and published. Each of the phases includes several design tools specific for the task at hand. The process is presented in the model in the form of a timeline, but in reality, the design processes are rarely linear. Instead, the process is an ever-changing and evolving, iterative process that, however, never returns, but rather forms loops that rotate continuously during the process.

Brown & Wyatt (2010) explain that the DT process is a combination of observation, collaboration, and quick concept prototyping. On the application possibilities of the DT process, he continues: “[the design thinking process] ultimately influences innovation and business strategy. The objective is to involve consumers, designers, and businesspeople in an integrative process, which can be applied to product, service, and experiences to market”. Speaking of the DT tools more specifically, Alves & Nunes (2013) identified the tools shown in Figure 2, the most typical in existing DT literature.

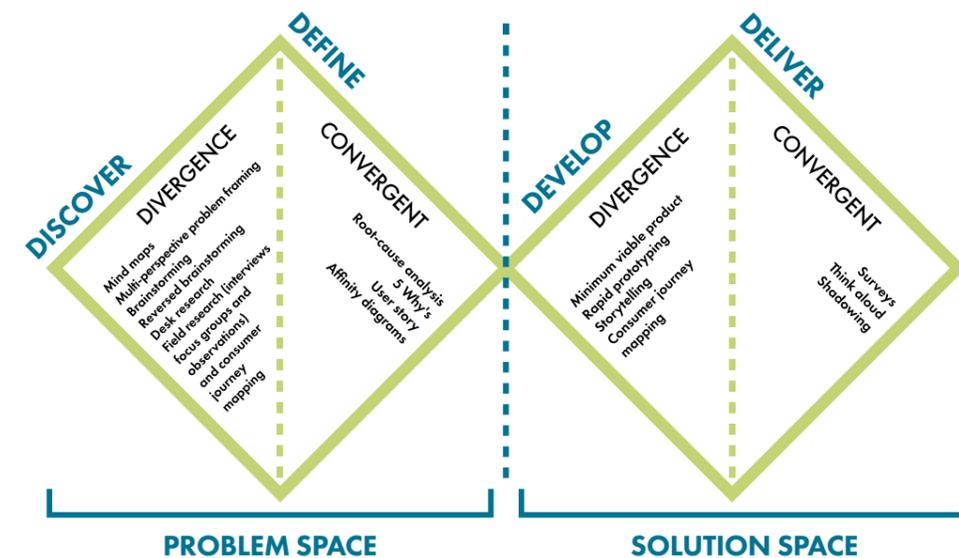


Figure 1: The double diamond model, introduced by British Design Council (2005)



Figure 2: Typical design thinking tools, after Alves & Nunes (2013)

Furthermore, in an extensive literature review conducted by Micheli et al. (2019), it is noted that the term design thinking has seen substantially varying definitions over time. By systematic literature review, however, they were able to recognize the ten most mentioned attributes of DT:

- **Creativity and innovation**
- **User-centeredness and involvement**
- **Problem solving**
- **Iteration and experimentation**
- **Interdisciplinary collaboration**
- **Ability to visualize**
- **Gestalt view**
- **Abductive reasoning**
- **Tolerance of ambiguity and failure**
- **Blending analysis and intuition**

According to Starostka (2014), some of the most preliminary key principles of design thinking include:

- **Deep understanding of the consumer based on emphatic approach (observational and ethnographic methods)**
- **Collaboration through forming multidisciplinary teams**
- **Accelerate learning through visualization, hands-on experimentation, and creating rapid prototypes, which are made as simple as possible to get usable feedback**
- **Visualization of concepts by using prototypes (concept sketches, physical mock-ups, stories, role playing) to make intangible become tangible**
- **Concurrent business analysis integrated during the process rather than added on later**

2.2 Design thinking in the organizational context

During recent years, DT has experienced growing interest among management and organizational studies. The initial views date back to the late 2000s when, according to Cooper et al. (2009), the concept of design thinking was increasingly taking hold in management and started laying the foundations for design to address new problems in organizations. While the role of design in products and services has been researched extensively, the scholarly discourse of the benefits of design, as a holistic toolbox for organizational issues, was long limited. Already in 2009, Martin introduced the concept of “design thinking companies”, while recognizing the rareness of such businesses. According to his idea, these companies think differently in three key areas: *structures*, *processes*, and *cultural norms*. As opposed to organizing the company only around fixed functions, permanent jobs and ongoing tasks, a design-oriented company needs to organize around projects. In terms of decision-making, design thinking companies balance reliability with validity (akin to the abductive logic in DT) and reward people for solving wicked problems. And about cultural norms, Martin (2009) describes how design thinking companies have cultures that think differently about barriers and constraints, and how DT-based problem-solving cultures create an entrepreneurial spirit – or teams of “intrapreneurs”.

As Gruber (2015) suggested, there are still arising questions and opportunities for empirical work and theory development, as well as for the development and testing of new conceptual frameworks and methods in terms of the role, impact, and application of design, not only to products and services but also to management science. During the late 2010s and the start of 2020s, the academic interest towards organizational applications of design thinking has increased. The integration of design with strategy is one of the most recurring themes in the discussion (Knight, Daymond, & Paroutis, 2020). It has been suggested that companies are willing to integrate design with strategy especially because through design, they are able to improve the product-market fit of their products due to active engagement with end-customers. Design is then seen as a way to improve the competitive advantage through products and services that offer better value than existing alternatives (Knight et al., 2020; Liedtka, 2019). Design as a strategic driver is shown to increase companies’ ability to innovate totally new business models (Bryant, 2020).

Even earlier, design thinking has been recognized as a key business asset that can add significant value to business performance in general (Brown & Wyatt, 2010; Kristensen, 2007; Press, 2003). Hertenstein (2001) indicates that the use of design has proven positive impacts on several financial metrics such as sales, return on equity, net income, and operating cash-flow. Rae (2016), in turn, shows that the stock market performance of a portfolio only consisting of corporations that extensively utilize design has been better than that of “non-design” companies. A stock index consisting of only “design-intensive” companies (16 publicly traded US companies such as Apple, Nike, IBM and Intuit) outperformed the general S&P500 index by 2,11 times or 211% between the years 2005 and 2015 (ibid.)

Design has also proven to be effective in the areas of brand and product. In terms of branding, according to Hands and Jerrard (2008), companies have been able to create stronger brand identities through design thinking as well as achieve better customer loyalty. The aspects forementioned have helped companies to improve customer satisfaction and create affective and emotional-level customer loyalty (ibid.). In terms of product development, prominent in previous literature are elements such as the creation of more innovative, attractive products that appeal customers’ attention (Bloch, 1995; Creusen & Schoormans, 2005; Hands & Jerrard, 2008)

While previous research has shown that culture has a key role in innovation processes (Higgins, 2004; Jassawalla, 2002; Martins & Terblanche, 2003), the role of design as a factor in organizational culture is less frequently discussed. Junginger (2015), however, examines the possibility that product development might lead to organizational change in an enterprise when it is bound to the idea that the process of product development should be “human-centered,” and thus provoke “outside-in” change, as opposed to the normal “inside-out” view of the organization as a machine

Companies seeking to internationalize and expand to new markets have also seen DT as a valuable toolkit. In addition to solving internal challenges such as product development, companies benefit from DT by overcoming external barriers, such as sociocultural differences when internationalizing to foreign markets (Carnall, 2016). For example, DT has proven effective

in innovating products for the emerging markets, by taking into consideration the market’s particular needs for frugal consumption (Schleinkofer et al., 2019). Creating an international competitive edge with strong brand recognition is another area for the application of DT in accordance with internationalization efforts (Pamflie, 2018). Also, design has been claimed to be a competitive factor for companies seeking international competition due to its ability to enable better user experiences in products and services (da Silva et al., 2021).

Of course, DT is not left without criticism. On the contrary, some researchers have criticized the decoupling of design thinking from design practice. While there are a variety of process-focused depictions of DT, they have been criticized to be limited in their ability to show what specifically occurs in practice (Carlgren, Rauth, & Elmquist, 2016). Some academics have also critiqued the essential idea of design thinking being too vague and undefined. For example, it has been said that the designerly way of working is way too diverse to be conceptualized under one framework and thus DT stands on a slippery slope. Due to the vagueness and unclear definitions of the concepts, the academic work around DT is criticized to be fragmented (Badke-Schaub, Roozenburg, & Cardoso, 2010). When it comes to assessing the impact of DT in business performance, it is important to note that decoupling DT from other factors is somewhat difficult (Björklund, Hannukainen, & Manninen, 2018).

2.3 Measuring the level of organizational design maturity

Calls for measuring both the impact and maturity levels of design have been prominent (Liedtka, 2020). Björklund et al (2020) argue that while the popularity of DT has grown significantly, measuring its impacts is challenging due to difficulties in decoupling the effects of DT especially from other internal approaches and methodologies that have effects in organizational outcomes. In addition to the intervening variables, the time lag between design effort and its effects is often vague. The impacts itself of utilizing DT can be broad which raises the question on what kind of effects it is meaningful to measure altogether. However, the literature on the effects of design in business includes several maturity models and other metrics of measuring the organizational design capabilities, both academic and

models created by design consultancies. In fact, it's noteworthy that many maturity models are indeed compiled by field practitioners rather than scientific researchers and for that reason also practitioner-based models are demonstrated in the following chapters.

According to Björklund, Hannukainen, & Manninen (2018), the most prominent measurement of an organization's design maturity has been the Design Ladder introduced by the Danish Design Council (2001). The Design Ladder divides organizational design maturity into four steps: non-design; design as form-giving; design as process; design as strategy. At the first step, design does not play a significant role in a company. A customer or stakeholder perspective does not affect product development. In the second step, a company uses design merely to develop the form, the usability, and the aesthetics of its products. It is relatively easy to measure the outcomes of design work at this level as they tangibly appear in new products or product features. In the third step, companies are able to apply design as a methodology, rather than a tool, in their projects. Stakeholder requirements are incorporated into the design process and can be tailored to the task. Finally, as the fourth and final step, the role of design in a company is strategic, meaning that managing and developing the company's strategy relies heavily on design. To create value for all aspects and stakeholder groups within the organization, upper management is intrinsically involved in the design process. In the definition, this means that the design activities are conducted naturally together with the companies' top level managers (Doherty et al, 2014).

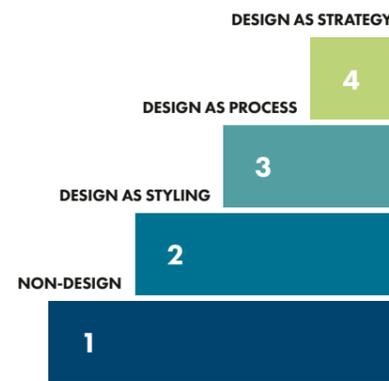


Figure 3. The Design Ladder (Danish Design Centre, 2001)

On the other hand, the Design Ladder has been criticized for being too generic and not industry-specific (Doherty et al., 2014). Björklund et al (2020) suggest that while the Design Ladder is still a relevant base model for assessing organizational DT maturity, companies should shift the focus from external to internal metrics when progressing through the Design Ladder. At the first two stages, the primary metrical needs lie within assessing the legitimization of design investments as they are usually among the first steps needed to be taken. At the third stage, it is crucial to track the growth in the utilization rate of design because it offers feedback on the efficiency of efforts and highlights the transformation. At the last stage, even more nuanced and company-specific measures are needed.

The Design Management Staircase by Kootstra (2009) is also a prominent tool among practitioners to measure the readiness and maturity of design use. It comprehends the Design Ladder by adding a parallel layer, namely the phases of awareness, planning, process, expertise, and resources. The Design Value Scorecard by the DMI on the other hand, is a model for both understanding the value of DT in an organization and the key growth drivers in the development and delivery of design (Westcott et al., 2013).

A significant, practitioner-led maturity model was created by Invision, a private design company as they introduced their Design Maturity Assessment model (Invision, 2019). With the model that has gained rapid popularity, they divide companies into five groups according to their organizational design maturity level: Producers, Connectors, Architects, Scientists, and Visionaries. Producers (1) are companies focusing on visual design but still having a drastic division between designers and developers. Connectors (2) are companies already using collaborative working methods and utilize some amounts of user research and testing. Architects (3) are organizations that have already established design teams and have structural design activities such as daily stand-ups and shared ownership in processes. Scientists (4) are companies that can be described as data-driven design experts. They already have design principles incorporated in their growth processes. The design team is empowered and can pursue important opportunities and executive employees are wholly part of the process. Finally, Visionaries (5) are companies that not only use design holistically with product development but also apply it in their internal business strategy.

In such companies, design is used to redefine the standards for customer experience and the business processes at a fundamental level.

As an example of an integrative business process framework, the Design-Led Innovation (DLI) framework supports organizations to see the strategic value of design (Bucolo & Matthews, 2010). The DLI in essence is an illustration of an integrative process that highlights the relationship between operational and strategic activities as well as the internal and external focus of such activities. At the centre of the model is the underlying opportunity that can be unleashed with DT.

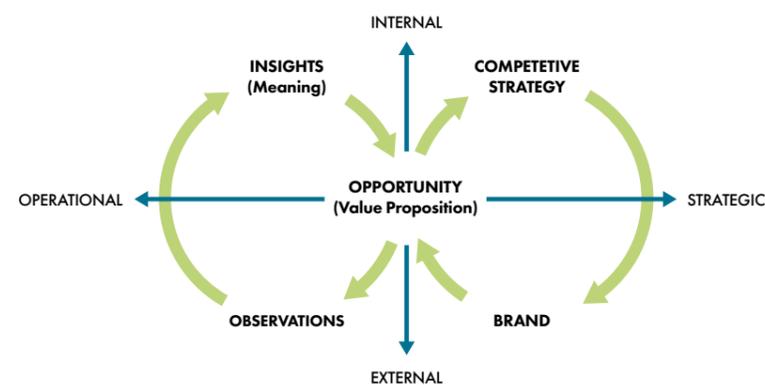


Figure 4: Design-Led Innovation framework (Bucolo & Matthews, 2010)

In addition to these models, there are at least 15 less known models, checklists or audits describing different angles of organizational design maturity, developed between 1984 and 2017. See Manzakoglu (2018) for more.

2.4 Becoming a design-driven organization

In this study, the main research objective is to recognize which practices enable or disable an organization to adopt design thinking. A closely related term, design-driven organization, referring to organizations which have adopted design thinking as a strategic and

organizational asset, was introduced more recently, by Björklund, Maula, Soule, & Maula (2020). By their definition, in design-driven organizations, design and DT have become an integral part of most of their organizational practices as these companies believe they are the fundamental engines of sustainable competitive advantage and value generation. Design is the driving force in these organizations – although not necessarily the designers – and DT is deeply embedded throughout the company. Björklund et al (2020) continue:

“Design-driven companies use design to redefine problems, to facilitate cocreation between different stakeholders, and to learn through experimentation. As a result, design can be seen as a cultural transformation process within a business, playing a pivotal role in the way the organization manifests itself in the marketplace.”

How does a company then become design-driven? Some enabling practices and activities that support the adoption of DT have been previously investigated by Rauth (2014). Within large companies, five types of efforts that support the implementation were identified: (1) demonstrating the usefulness of DT with first external, then internal success stories; (2) fitting DT to the specific cultural and organizational context of the company; (3) convincing people through first-hand experiences; (4) creation of ambassador networks inside the company, meaning that employees or managers with positive experiences are encouraged to share them; (5) creating dedicated physical spaces and related artefacts, for example as workshop rooms.

Also, the elevation and legitimization of design thinking in an organization has also been researched lately by Micheli, Perks, & Beverland (2018). They found out that in order to elevate design to a strategic level, upper management representatives need to develop clear message of how the organization will benefit from design, as well as grant autonomy to the design function. Next, the designers should be able to articulate their distinctive contribution to the organization’s strategic goals. Also, it should not be forgotten that in an effort to elevate design, an organization needs to modify their processes, for example with balancing between formalization and flexibility as well as between empowerment and adaptability. Additionally, according to Micheli et al, designers need to act as internal

influencers who champion design while being aware of commercial considerations such as proving the business value of design activities.

Based on their interviews with over 100 key design employees and managers in large technology companies Björklund et al. (2020) argue that in order to become a design-driven organization, an organization must undergo a fundamental transformation process. The researchers suggest that the most preferred way to foster organizational-wide design capability is to simultaneously advance two tracks of design expertise: deep and wide. Deep design expertise can be brought to the company by professional designers, be it through hiring in-house designers or utilizing external design expertise. The accompanying track, developing wide design capabilities includes a widespread understanding and application of design approaches, as well as the provision of organizational structures that support design efforts across the organization.

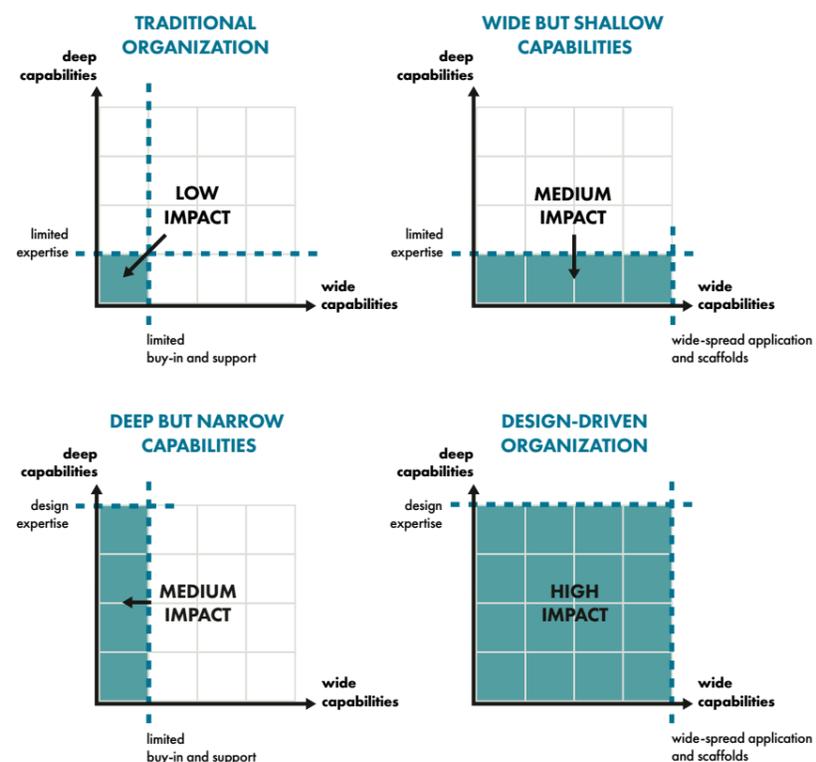


Figure 5: Deep and wide design expertise building the organizational design competence (Björklund 2020)

In assessing the design transformations of several large technology companies, Björklund et al. (2020) identified three common problems. These include:

- **Boxing in Design with Ineffective Cross-Functional Collaboration**
- **Decontextualized Information Resulting in Unactionable Design Thinking**
- **Fragmented Design Efforts Lacking a Shared Framework**

The material and spatial dimensions within the process of adopting DT in an organization have also been recognized. Seifried (2019) argues that the adoption of DT often becomes visible with new approaches to designing office and learning spaces. He goes on to suggest that DT requires physical spaces that are different from the traditional ones, having a special need for premises that foster creative thinking. Utilizing DT often means collaborative work and thus requires spaces suitable for teamwork. Also, the spaces play a crucial role due to the need of a “mindset change”. This means that to get into an innovative mentality, practitioners need to get out of their daily routines. Seifried (2009) goes on to describe the effects that individual architectural choices with working spaces, such as movable furniture or writable glass walls, might have on the imagination and inventiveness of employees.

Less academic work has focused on the design transformation journeys in individual companies (Doherty et al., 2014). As an exception, Mutanen (2008) reviewed the development of organizational design capabilities in a Finland-based engineering corporation, Metso. Also, some master’s level dissertations have been conducted – see Kosmala (2018) and Koivuaho (2018), as well as Nusem, Wrigley, & Matthews (2017). Now, my study will enrich this category of research.

2.5 Organizational transformation as an ongoing process

In this study I examine the practices that enable or restrict the adoption of design in the organization. In this way, I am also scrutinizing if and how my case organization is transforming to a design-driven organization. Transformational change is often defined as the

process of facilitating fundamental change within organizations and it has been viewed broader in both scope and time than other forms of organizational change (Porras & Silvers, 1994). Rather than just changing behavior, it involves a shift of thinking and can be thus compared to changing the “DNA” or culture of the organization. The need for such a fundamental change often arises when organizations shift their basic mission, enter entirely new markets, or fail to meet competitive challenges. (Sugarman, 2007)

Sugarman (2007) divides organizational transformation under two approaches. The first, called the “Grow” approach, involves empowering employees and engaging them in collective learning and problem solving, so that their expertise can be applied to improve organizational processes and procedures. This model focuses on learning-based leadership and does not tell employees how to solve problems, but rather sets up the conditions for them to come up with their own solutions. Change by this approach tends to happen more slowly but it can create more commitment throughout the organization and the change is also less dependent on the constant push from the top. On the contrary, the “Drive” approach is more top-down in nature. Those who favor a “Drive” approach, place more faith in changing reward systems, regulatory guidelines, resources, controls, and related structures to achieve change. In this approach, efforts to communicate change should be driven from the top, while human resource factors such as team learning, visioning, and meaning-making receive little consideration. Typical to this model is to have a forceful process from top executives, using executive authority. Although this top-down process might achieve a rapid start, it usually lacks sustainability, particularly when the top leader is distracted from their responsibility as the principal driver of change.

In addition to these two main approaches to organizational transformation, there is a “technological imperative” perspective. This approach focuses on technology as the source of organizational transformation, dismissing the effect of both managers and other organizational actors. According to this view, technology is the primary driver of organizational change because new technology has predictable effects on an organization’s culture, routines, information flows, and performance. (Orlikowski, 1998)

Orlikowski (1998) has suggested another, complementing way of theorizing organizational transformation. With her perspective, called “a situated change perspective”, Orlikowski criticizes the previously mentioned approaches for the neglect of emergent change. This view is based on the notion that emergence is of particular relevance in today’s organizational life where unprecedented technological and environmental changes trigger such patterns of organizing that cannot be planned. Instead of deliberate plans, guidelines and control, this perspective suggests that organizational transformations are grounded in the ongoing practices of organizational actors. As Orlikowski notes:

“The change emerges out of their (tacit and not so tacit) accommodations to and experiments with the everyday contingencies, breakdowns, exceptions, opportunities, and unintended consequences that they encounter. [...] In this perspective, organizational transformation is not portrayed as a drama staged by deliberate directors with predefined scripts and choreographed moves, or the inevitable outcome of a technological logic, or a sudden discontinuity that fundamentally invalidates the status quo. Rather, organizational transformation is seen here to be an ongoing improvisation enacted by organizational actors trying to make sense of and act coherently in the world.”

In this view of organizational transformation, the assumptions of change are based on action, not on stability. Furthermore, the reality of organizations is *enacted* and as Giddens (1984) notes, the organizations are constituted by ongoing agency of their members and exist merely because of such agency. Any action that the members of an organization take makes the organization’s properties either reproduced or altered. Change often happens in variations organizational actors take and as Orlikowski concludes, recurring, sharing, amplifying, and sustaining those variations can, over time, result in measurable organizational changes.

As Tsoukas & Chia (2002) have earlier suggested, it is fruitful to view change as an ongoing, natural process rather than an exceptional, orderly one. In the view, change is the state where actors rewire their webs of beliefs and habits of action in response

to new information gained through interaction. Inherently related is the sensemaking the actors do and furthermore, organizations are seen as sites of continuously evolving human action. This view is relevant because of three reasons. First, it steers the interest of the researchers to collect a more complete understanding of the *micro-processes* of change at work. This can involve replying to questions such as *how, by whom, using what means* the actions and structures change and get legitimized. Second, this view encourages us to look at the micro-actions that occur on the ground – how plans are translated into concrete actions and what kind of emergent accomplishments or routines are performed in the process. Third, treating change as stable epiphenomenon usually leads to a practical problem: change will not happen. It is difficult to facilitate change when the diversity of the phenomenon cannot be seen.

This practice-based perspective is particularly relevant to my research as my case study contributes to the practice approach of organizational changes. Practice theory, in essence, is interested in the practices that guide actions in an organization (Feldman & Orlikowski, 2011). When examining how an organization is adopting design with a practice-based approach, the practices of *doing* design are under the microscope. It is noteworthy to introduce a related term, design-as-practice, that was first introduced by Kimbell (2009). She suggests that to fully understand the “habitual, possibly rule-governed, often shared, routinized, conscious or unconscious, embodied and situated” practices of the design work, the actual practices must be examined. She also notes that design-as-practice cannot conceive of designing (the verb) “without the artefacts that are created and used by the bodies and minds of people doing design”. Thus, Kimbell views design as a situated and distributed accomplishment in which various things, people, and their actions and words are involved. According to her, the concept, design-as-practice provides extensive resources so that we can understand what happens during design processes and relate them to organizational outcomes.

While Kimbell (2009) focuses especially on the work of proprietary designers, she goes on suggesting that this particular “approach acknowledges the work done by professional designers in their practices, but also opens up design to others, such as managers and employees in organizations during design processes, and also customers, end-users and other

stakeholders who through their practices also take part in design.” As Kimbell (2009) notes, the design-as-practice approach opens new frontiers also in the management and organizational research. Especially considering DT, she notes that the practice-based approach changes the focus to the practices involved during the design process, instead of solely concentrating on the cognitive styles of individuals or teams of designers or other professionals or employees. However, in this study, the interest goes beyond design processes, to trace all practices that affect the adoption of DT.



RESEARCH METHODS

3.1 Representing the constructivist paradigm

Good research carefully evaluates its roots in ontological assumptions and epistemological paradigms. These paradigms help the researcher to structure the world and the surrounding reality. Research is also more resistant to storm winds or criticism when its foundations are in order. Different fundamental interpretations in perceiving the world can also lead to very different outcomes. It is therefore appropriate to take a moment to consider how the foundations of this research have been cast. (Creswell, 2009)

In terms of science-philosophical paradigms, my research is based on the social constructionist worldview. The essential idea of the constructivist worldview is that there are no unchanging truths or little pre-existing knowledge. Instead, individuals and groups rebuild perceptions and interpretations of reality, based on their own world of experience and observations. In the constructionist line of research, the aim is not so much to produce generalizable, universal knowledge, but to understand the positional and situational nature of phenomena. The constructionist worldview also recognizes the constant modification and renewal of knowledge and the fact that reality is not permanent in nature. (Creswell, 2009; Vivien Burr, 2015)

In line with the social constructionist science-philosophical approach, I expect that any knowledge of DT, organizational change and practices are built in social interactions. Central to the idea of the constructivist worldview is the idea that the researcher is an integral part of their research with their own background assumptions and starting points. For this reason, based on the constructivist worldview, I am obliged to open my preconceptions more broadly in my research. The idea itself is comforting; I don't have to strive for absolute neutrality when doing research as the result of the research is a social construction itself. The study carries a worldview built between the researcher and the material acquired.

3.2 Narrative study with a practice lens

My research, in its essence, is a narrative study. The narrative research approach puts stories and narratives at the center of scientific research. The theoretical roots of narrative research stem from philosophy and linguistics and literature (Eriksson & Kovalainen, 2016). The narrative line of research has grown in popularity since the 1990s, when it was first used in literature and media research. Narrative research has spread to various disciplines and has grown strongly, especially in the social sciences, with the so-called “linguistic turn” (Riessman, 2008). The narrative research methods have also grown in popularity in organizational and management research. The central idea is that the object of research interest is the stories people produce about their reality. Narrative research approach also encompasses efforts to analyze research data in narrative format as well as writing of narratives.

I chose the narrative research approach as my research method primarily because I want to produce a rich understanding of how design is practiced in an organization. Also, presenting the results through narrative writing leads to a reader-friendly end-result. By reading the contextual stories readers get to experience the reality of the case organization in a profound and authentic way. Thus, I ended up choosing one company as my research target and studying a highly limited phenomenon within the company. If I had chosen more than one company under my study, I would have compromised the depth of the immersion with the case organization.

In my study, a practice lens is applied. Having a practice lens means having a special interest in the people’s recurrent actions as the building blocks of reality (Feldman, 2011). In this study the phenomenon of organizations adopting DT and changing its activities is understood through practices. As Orlikowski (2010) suggests, practice theory can be understood in three ways: an empirical approach to how people act in organizational contexts; understanding the relations between actions people take and the structures around social life, and lastly, as a philosophical focus on the constitutive role of practices in producing social reality. While recognizing these three assumptions, my research has a special interest in the doings people take that foster or hinder a particular concept (DT) in the organization. By practices I mean recurring everyday actions, organizational and individual routines

and akin to Giddens (1984), those social actions that recursively produce and reproduce the structures that constrain and enable actions. According to Reckwitz (2002), practice is a routine activity consisting of several interrelated elements: physical and mental activity, material objects, knowledge, skills, and emotions. When performed alone, the elements do not form a practice, but the practice arises from the intertwining of the elements. Practices are thus ways of thinking, acting, feeling, and using artifacts.

Speaking of artifacts, Feldman (2011) notes that practice theory nowadays is also interested in relationships beyond human agency. In producing social life, nonhumans such as natural objects and technological artefacts such as computers and phones play an important role. This *socio-materialism* is something my research also takes into consideration – for example by recognizing material objects such as computers, workshop facilities and related as one of the building blocks of experienced reality. Hence, in my study I examine activities and practices in relation to design, without forgetting how materiality is involved in these activities and practices.

3.3 Narrative interviews as the source of research data

The primary data of my research consists of eight semi-structured, narrative interviews. Having a narrative focus means that the interviewees are encouraged to produce stories based on their everyday lives (Eriksson & Kovalainen, 2016). A narrative interview is open in two ways: there are no prior hypotheses or propositions to be tested, and the participant is encouraged to talk openly. Semi-structured interview style means having a predefined set of questions but still showing special interest towards the participant’s answers with follow-up questions. Semi-structured interviews have proven to be a valuable means to produce data in qualitative research especially when examining uncharted territory with unknown but potential momentous issues (Adams, 2015). One of the advantages of a semi-structured thematic interview is that it allows the participant to reply with open-ended answers as well as for the researcher the opportunity to ask more specific questions about new topics raised by the interviewees (Adams, 2015; Arsel, 2017).

There were a total of five loose, guiding themes: the participant's own background, the role of design thinking in participant's own work, the change in the role of design in participant's own work, the role of design at the company level, and the change in the role of design at the company level. The interviews were conducted in either Finnish or English, depending on the participant's mother tongue. The conversations were recorded and transcribed into text within a few days of each interview. The body of the interview can be found at the end of this study.

I decided to interview such employees and managers at the case organization who have been involved in applying design thinking in the organization, either in the design team or in other parts of the organization. Interviewees were asked to participate via the person in charge of the company's design function, so I was not personally selecting the final interviewees. An invitation to the interview was sent to several people in the organization and participation in the interview was voluntary. Of the eight people interviewed, three people represented present or previous managerial positions in the internal design function of the company. Two other people represented employee level positions in the design team of the company. The remaining three respondents represented the business departments of the company, one being part of an internal startup. The exact titles of the interviewed people remain classified due to anonymity reasons. Thematic interviews lasted 36–52 minutes, with an average of 43 minutes, all of them being one-on-one discussions. The interviews were conducted in Microsoft's Teams virtual environment in the form of video calls.

In interview situations, I attempted to keep my own position neutral. Even if I had the temptation to raise my voice and opinions on several occasions, I didn't go deeper into commenting on the participant's responses or expressing my own opinions in the interview. However, at the beginning of each interview, I highlighted my intrinsic motivation for the research, which revealed my own, initially positive attitude towards design thinking and the possibilities of its application. Here, I must recognize that the way the participants were invited to the interview might have had an impact: the group of interviewees in the target company was defined by the person in charge of design in the organization, and invitations

to the interviews came through them. In some interviews, I sensed such preconceptions that I was doing my research on the behalf and for the design team, so in these situations I particularly emphasized that I was an independent researcher outside of the organization.

Conducting the interviews via video calls turned out positive. Most participants were having a remote working day and thus the interviews were conducted in their current ordinary working environment. The same applied for me as the interviewer. Of course, for better immersion of the actual working environment, the better choice would have been to visit the company's offices. In a sense, the online way of conducting the interviews offered a neutral positioning for both the researcher and the participants and the participants could take the interview in the middle of ordinary working routines.

3.4 Thematic narrative analysis as the tool for analyzing

As the essential method of data analysis in my research, I use thematic narrative analysis. The choice of analyzing method was relatively easy, as my research material is typical narrative interview data, and I did not feel that I achieved benefit or better results using some more complex analytical methods. Narrative analysis involves organizing and interpreting empirical data that describes events, outcomes, and actions in such a way that they construct one or more narratives that can be analyzed and interpreted. The analysis focuses on what is said rather than how it is said (Maitlis, 2012). Thematic narrative analysis follows the typical content analysis frame that consists of seven steps: setting research questions, selecting material, defining applicable categories, defining codes, coding process, evaluating reliability, and analyzing the results of the coding process (Hsieh & Shannon, 2016). As is typically the case with qualitative content analysis, my analysis process also began with a profound familiarization with the data. The purpose of this stage is to immerse oneself in the material as well as to obtain a comprehensive overview (Tesch, 1990). During the introductory phase, I both listened to the interview recordings and read the transcribed texts several times. I also wrote down some of my initial observations.

The actual analysis took place within about two months of the end of the interviews. A longer break between producing and analyzing the material was deliberate, as I wanted to take a distance and intentionally “forget” the material for a moment. As an interesting detail, at this point of the analysis I listened to the research interview recordings with different speeds (0,8x, 1x, 1,5x) in order to approach the material from different angles. In this way, I also attempted to weed out the effect of intuitive prediction on data analysis. My approach to data analysis could thus be described as traversing a hermeneutic circle in which the researcher moves in a circle between theoretical understanding and pre-theoretical or practical understanding (The Finnish Science Term Bank).

In line with the phases of qualitative content analysis, after the familiarization process, I proceeded with the coding phase. The purpose of the phase is to identify and extract “codes” from the material, i.e., words and phrases that contain key ideas and concepts that are central to the research (Miles & Huberman, 1994). At this stage of the analysis, I identified and labeled the phrases related to my research question, i.e., practices that enable or disable the adoption of design thinking, and descriptions of related events. At first, I did the coding with nVivo but soon I found manual processing with MS Word being the more natural choice as the amount of the material was still easily manageable. Regardless of the software, in the coding and analysis, it is important to organize the material in a clear and concise format in a way that does not lose the information it provides (Tuomi & Sarajärvi, 2018).

Before the thematic classification phase, I decided to divide the interview data into three types based on how the participants placed in the organization for their job responsibilities. From the eight interviews, I formed a total of three types of respondents, which were: (1) the person in charge of the design function, (2) a regular member of the design team, and (3) a member of a business unit, or a *non-designer*. In the thematic classification phase, I collected the coded expressions from the interviews into similar themes, per each type of participant. Each of the coded expressions described a single practice that either enabled or disabled the adoption of DT in the organization.

As the next phase, I grouped the coded expressions that describe mutually similar practices into sub-themes. After that, I again grouped mutually similar sub-themes together and created a new classification, the main themes. I repeated these steps for each of the three types of respondents. Finally, all the respondent types had their most recurrent practices with several descriptive sub-themes, which are displayed in the results chapter. The most recurring practices regarding all respondent types are also presented in a collective table at the end of the results chapter. The tables form the basis of narrative writing, the form in which the results are presented.

Generally, the analysis process of my research went well, although from time to time, there were difficulties in producing consistent definitions of main themes and sub-themes. Clear and consistent naming of themes, starting from the beginning of the analysis, is something I will take with me to my possible future research projects.

3.5 Presenting the results in the form of narratives

The results of the study are presented in the form of narratives. Narratives, or storytelling, are the oldest way of communicating information in human history and it has been suggested that narrative texts are richer and more immersive and easier to remember than non-narrative texts (Eriksson & Kovalainen, 2015). Narratives are seen to have a unique ability to express social phenomena in their full diversity (Clandinin, Murphy, Huber, & Orr, 2009). It is characteristic of a narrative text to tell a story about a particular time and context to a particular audience. Often, the narrative includes a plot and characters and is intended to evoke emotions in the listener, also utilizing symbolic elements (Gabriel, 2000 via Eriksson 2015).

Eriksson & Kovalainen (2015) state that in writing a narrative, the key is to organize events and details from empirical data into a clear and descriptive whole, i.e., a story that must be understood by the reader. In addition, the narrative should have a plot: a beginning, a middle, and an end, as well as some characters. Typically, a narrative is based on

a single main idea that is told from a particular perspective. The narration itself can occur in many ways, including in the self-form, if the researcher wants to emphasize their own thoughts in the narrative (Ellis, 2004 via Eriksson et al., 2015). The narration in my own research is carried out from a third person and mainly in chronological order. In terms of chronology, a general rule about the order in which events should be unfolded, does not exist. In any case, what is important in narrative writing is to bring life and emotion to the text so that the reader can best experience the story (Ellis, 2004 via Eriksson et al., 2015). Specific elements in a narrative text can be, for example, dialogues, although some things may be good to leave to the reader's own imagination.

With the narrative presentation format or narrative writing, I want to provide the reader with the most authentic way possible to get to see the reality of the organization from the perspective of the participants. In my opinion, narratives are also a reader-friendly way to present research results, in addition to the more traditional tables. In this study, I constructed three narratives based on the three types of respondents mentioned in the previous chapter. The first figure, Martine represents the three research participants that are or were in the managerial positions of the design team. The second figure, Mike, represents the two regular members of the design team that were interviewed. Finally, Inge represents the two respondents that worked in the business departments of the case organization. It is important to note that characters of the narratives have been given fictitious names and the genders or ages don't necessarily reflect those of the actual participants.

Each narrative is thus made up of interviews with at least two people, with the objective to construct them so that the main results of each interview are equally represented. In concrete terms, the narrative stories are built upon the practices and actions that were identified in the interview data analysis. The narratives are thus fictional, but the content is entirely based on the descriptions of everyday activities the participants described in the interview data. Also, the narratives are embellished with aspects of storytelling which means that feelings, thoughts and richer narrative elements are presented in addition to the sheer practices. For example, if one participant talked about

a practice related to conducting workshops on one day and another participant described the consequences such workshops have, these activities could be connected together forming a coherent story. It is important to note, however, that in the case of the narrative presentation of results, the researcher's own role as an actor is emphasized (Bönisch-Brednich, 2018). It is almost impossible to strive to construct narratives in a completely neutral way without the researcher's personal choices and preferences of writing. Therefore, the reader needs to recognize that the narrative presentation format has its tendency to reflect some of the researcher's underlying perceptions or manners.

3.6 Evaluation and ethical questions of the research

Typically, qualitative research is evaluated with the criteria of reliability (in essence, how repeatable and consistent the research is), validity (how well the presented results are backed by evidence) as well as generalizability (questions on whether the research results can be extended into a wider context). However, it has been suggested that the evaluation of a *constructionist* qualitative study should be assessed using slightly different criteria than the more traditional ones described above. These following criteria better reflect the philosophical starting points of non-positivist approaches, such as social constructionism applied in my study. (Eriksson & Kovalainen, 2015).

Credibility – is the data collected in the process sufficient to merit the claims? If another researcher would look at the produced data, would they end up with somewhat similar conclusions? In my study, the interview data was precisely transcribed into text and the analysis of the data was conducted according to the principles of narrative content analysis. Every meaningful piece of data was analyzed and treated equally in the analysis process. It is highly presumable that another researcher would end up with largely similar findings. At the same time, I recognize the special feature of narrative content analysis is that, in terms of coding and thematic design in the analysis, each researcher is somewhat dependent on their own background assumptions. That's why it is still possible that another researcher would have made partially different observations and conclusions from the same data.

Transferability – is the researcher showing the connections that the research, or parts of it, has with previous research results conducted in closely related fields. The aim of this is to make visible the links that could be found regarding other research contexts. In my study, the previous and existing studies related to my topic are carefully reviewed. Searches for previous studies in closely related topics were done in the leading databases for management and organizational research, as well as design research (including ProQuest, Ebsco, Emerald Journals, SAGE Journals, Taylor & Francis Online). Observations and links to the existing scholarly discussions are made during the study and particularly in the final chapter.

Dependability – is the researcher sharing information to the reader on the different phases of the research process regarding how logical, traceable, and documented the process is? In any case, behind every observation and theme I have raised are genuine and verifiable expressions from the interview material. Direct citations are displayed in the results chapter, to increase the authenticity of the findings. The interview set is attached in the end of the study and can be assessed freely by readers.

Confirmability – how logical are the interpretations of an inquiry related to the data? The analysis process in my study was conducted with sufficient consistency and the claims presented in the next chapter are results of logical reasoning. It is critical to note, however, that the underlying assumptions of the researcher are inevitably present in the interpretations. Even if there are no intentional pursuits to modify the interpretations in any way, the unconscious background assumptions are practically inseparable in the interpretation process. This is to be noted not only in my study but also in any other qualitative studies relying on the social constructionist philosophy. Moreover, central to the paradigm of social constructionism is the idea that there are few absolute truths and that the reflection of reality constructed between people and in this case, participants and researcher, is valid as it is.

Good research practice also involves careful evaluation of ethical issues. A key part of the nature of scientific research is to make visible all the relationships, connections or position-related factors that may affect the researcher or the conduct of the research (Salonen, 2007). My own research position in relation to the research phenomenon is not completely neutral,

as alongside my studies, I work in an expert organization of design thinking. Positive experiences of utilizing design thinking in the work context have led me to have a positive attitude towards design thinking and its possibilities. However, my attitude is not dogmatically positive as I understand and recognize the criticism on the subject. Thus, my goal with the research is not to present one truth but rather one interpretation of the phenomenon.

Although I have received support and encouragement to conduct research from my work community, the employer has no interests or assumptions about my research or its results. Regarding my relationship with the case organization under research, I would describe it as completely neutral. I am only familiar with the organization through media texts, as I do not personally know the people working in the organization. My intention is not to harm the organization under research, or any individuals involved in the study.

The research process has followed the ethical principles of good research practice (Finnish Advisory Board on Research Integrity, 2012). Interviewees have been told transparently about the recording, processing, and purpose of the interview material. Anonymity is guaranteed for the study participants as well as for the case organization. The public research report does not provide any expressions or details that could be used to infer the case organization. At no point will the interview material be disclosed to anyone outside the study, and it will be retained securely until it is destroyed at the end of the research process. The funding of the study is openly disclosed in the research report. In conclusion, there is no conflict of interest to declare.



THE NARRATIVES

– from a company becoming design-driven

This chapter consists of introduction of the organization under research and then the actual research results. The results are told in the form of narratives, accompanied by illustrated personas (a prominent visualization tool in design) of the participants. The first narrative is about Martine who represents the findings of the research participants in a leadership position of the design team. Second, Inge tells her story representing the members of the design team. Lastly, Mike brings the perspective of business unit members to the picture.

4.1 A Nordic energy company undergoing a design transformation

While the possibilities of DT have been explored across many fields and industries (Todorro, 2019), the energy and utility sector remains widely unexplored. The energy sector is thus an interesting choice for DT research. Therefore, a Nordic company operating in the energy sector was selected as the subject of my case study. In the company, design thinking and its applications, such as service design, have been applied for several years, and customer-centricity in line with design thinking have been in the strategic focus of the company's development, according to the managerial representatives in the interview data. The company is large in terms of revenue and employees and thus has several potential use cases for design thinking, such as the active development of new products and services.

In the interview data, it was explained that a dedicated design function was established in the company in the mid-2010s. The interview material also indicates that the design function has steadily grown over the years accompanied by external design expertise purchases. Some of the company representatives have communicated design-related goals on LinkedIn and on the company's public blog on their website. These reasons made it natural to select this company as the subject of my case study. Due to the company's preference, the name of the company remains unpublished and that's the reason for not describing the company in greater detail.

In addition, one important factor behind the choice of the target company is that I am interested in the possibilities of utilizing DT in connection with the company's international

growth and internationalization. The case organization is already international, having operations and clients in Nordic countries and beyond, but is still striving to internationalize, for example through acquisitions and organic expansion. This fact makes the case and its takeaways interesting for managers in smaller companies, especially in the energy and utility sector.

4.2 Martine – the design lead



Martine works in a leadership position for a design team in our case organization. In the company, Martine's team can be found inside a support unit separate from the business units, which horizontally supports business units operating in different parts of the organization in the application of design thinking. The tasks of her team members range from simple visual design work to service design and digitizing entire work phases.

Martine's organization is experiencing interesting times of change, as the company is internationalizing, and some business priorities are changing. She is taking on an important role, as her team has a key role to play in the company's efforts of becoming more design-driven. Martine remembers that design thinking has been initially introduced in the organization as a result of senior management measures, back in the early 2010s, when design expertise began to be purchased from external consultants approximately ten years ago. These

consultants created the foundations for design tools and activities in the organization, especially in the consumer division. After that, it was time to set up an in-house design team, which set out to bring design thinking first into small pioneering projects. Since then, Martine has seen the purchases of external design expertise decline, while design team has taken on a greater role in internal service and product development. This development is something Martine is hoping to see this go further in the coming years.

The design team itself has until recently been seeking its place within the organization. It was first utilized in a business unit that produced services for consumer clients and after that, the design team found itself as a part of the software development function. Martine is happy about the fact that the design function is nowadays much more independent in the support function, and not just part of a single business unit nor compartmentalized in the software development function. Now, the team is still small, and the resulting lack of resources means that the team is unable to respond to every request for help within the organization. However, Martine feels that the team's work is appreciated and especially the team's professionalism and handprint has garnered praise. The team itself works internationally and is composed of members from several countries. The team worked remotely to a significant extent already before the pandemic and Martine sees this trend continuing.

Martine identifies several practices that contribute to the organization-level utilization of design. Perhaps most important according to Martine are the numerous internal development programs in the company such as the yearly innovation accelerator "Sprint" which combines design thinking methodology and other tools for rapid product and service development. In these programs Martine's team members have been able to show and share their knowledge to a large number of employees in our case organization. Martine is sure that through this practice, the usefulness of design is exhibited to several employees at once, and employees get to learn how to apply design thinking in practice.

However, at these occasions Martine has noticed that people outside the design team often lack the courage to start exploiting and experimenting with the design methodology themselves. Although the work of the design professionals is already highly trusted in

some business units and the work of designers is in high demand internally, the ultimate ability and courage to act without the proprietary designers is lacking. In some situations, the design thinking tools are also used incorrectly and without profound understanding. Sometimes design tools such as the service path are seen in business units only as checklists that *“just have to be done”*. This leads to Martine’s notion that the general knowledge around design thinking methodology could still be a lot better.

Also, in terms of design maturity, Martine recognizes significant imbalance between different business units. Some units, especially the ones close to consumer customers are more accustomed to using design thinking in development processes. These teams actively ask support from the design team in product and service development. This is a result from years of cooperating closely with the design team which used to be part of this particular business unit. On the other hand, some other business areas are not especially familiar with design thinking, Martine discusses.

To remedy this situation, Martine’s team has worked hard to make the design methodology available to as many people as possible through e-learning materials. Producing the learning material is seen as a tool to bring the methodology available to the business units regardless of the design team’s intervention. The design team has itself utilized design methods to create this set of learning materials.

Martine is occasionally concerned about how business units are able to recognize the true value of design. Martine has noticed on various occasions that it is crucially important to create legitimacy for design activities, as development resources in different business units are inherently limited. It is vital to be able to demonstrate the business value of the design in order to invest in the development with these tools. This is something Martine sees as one of the most crucial defining issues regarding the wider utilization of design thinking in our case organization for the future.

ENABLING PRACTICES ACCORDING TO MARTINE

PRACTICE	DESCRIPTIVE ACTIONS AND DIRECT QUOTES
BUYING DESIGN EXPERTISE	<ul style="list-style-type: none"> Acquiring external design expertise at an earlier stage (early 2010s) <p><i>“A huge number of consultants were initially recruited. A dedicated team was then recruited. Then the team set out to build and continue the work that these consultants had done.”</i></p>
INITIATING DESIGN PROJECTS	<ul style="list-style-type: none"> Internal development programs have brought visibility to the design team and their skillset Initiating smaller pioneer projects that have a design focus <p><i>“When I first started, there were these big sort of change efforts or these big programs focused on trying to spread this way of working or make sure that various projects and organizations adopt it.”</i></p> <p><i>“The idea there was to break us down into smaller teams and rather than trying to cover everything with the design thinking to try to have these smaller pioneer projects that would adopt both an agile methodology and the design thinking methodology.”</i></p>
PROVIDING DESIGN COACHING FOR PROJECTS	<ul style="list-style-type: none"> Using internal methodological support guides to build the design capabilities among employees Training people in the business departments in the independent application of design methods <p><i>“We have projects where we coach, where we don’t do the work, but we try to get our other employees to do those design activities, for example, to interview people or something like that.”</i></p>
INTEGRATING DESIGN TERMINOLOGY WITH BUSINESS TERMINOLOGY IN STRATEGY DOCUMENTS	<ul style="list-style-type: none"> Promoting design to be one of the business priorities Consistent management communication and “push” for design Integrating design into the business strategy <p><i>“They (top management) really put customer centricity and certain other sort of buzzwords around design thinking in our strategic vision and that really did seem to make a difference overtime.”</i></p> <p><i>“We try to combine design with business goals, that it is like a more abstract, not so clear projected thing at a slightly higher level.”</i></p>
PROVING THE BUSINESS VALUE OF DESIGN	<ul style="list-style-type: none"> Additional demand created by the work of designers in business departments The ability to demonstrate the business value of the design <p><i>“Some [business areas] have it [demand for design]; where a designer has sometimes done work, there are usually additional requests because through practice they learn to understand what can be achieved with it.”</i></p>

DISABLING PRACTICES ACCORDING TO MARTINE

PRACTICE	DESCRIPTIVE ACTIONS AND DIRECT QUOTES
INABILITY TO SUPPORT THE BUSINESS UNITS DUE TO INADEQUATE RESOURCES	<ul style="list-style-type: none"> No opportunity to make an impact on projects due to limited resources The design team is unable to support all the needs in the organization due to limited number of designers <p><i>"However, we have always had a pretty small team, so we have had more demand towards our work than what we can supply."</i></p> <p><i>"We are such a big organization that we can't ... It is one thing that we constantly receive feedback about. That there should be more of us, and we should be able to support more broadly."</i></p> <p><i>"We try to combine design with business goals, that it is like a more abstract, not so clear projected thing at a slightly higher level."</i></p>
PRIORITISING SHORT-TERM PROFITS AT THE EXPENSE OF PROPER DESIGN PROCESS	<ul style="list-style-type: none"> Design team prunes their actions when working with business departments Business units are unable to purchase knowledge from the design team due to limited resources The design team and the business departments pursue for partly different goals People willing to use design are unable to demonstrate the business benefits <p><i>"Without the ability to really implement it, it's really hard to run an agile process or even a design thinking process because you can't, really... You can't materialize."</i></p> <p><i>"But for a while, they're not going to be experts at it, so, you know, it's going to lower their productivity in the short term."</i></p>
QUASI-USE OF DESIGN TOOLS	<ul style="list-style-type: none"> Design tools are occasionally used as of intrinsic value, without proper understanding People in the business units do not dare to use design methods themselves Design and Agile tools are seen overlapping <p><i>"It can sometimes be more like "yeah we have to build a customer journey map even though we really don't know what we're using it for". We're not going to apply it into for work going forward, it's just sort of like a check box that has to be done."</i></p>
DESIGN ACTIVITIES ARE CONDUCTED IN POOR FACILITIES AND WITH UNRELIABLE TOOLS	<ul style="list-style-type: none"> Lack and poor access to cooperation facilities Unreliability with technological tools <p><i>"I mean they are challenging themselves to get to get everything to work. And, you know, make sure that people are coming into the meetings and all that stuff. So there's always challenges to the technology. Getting the technology up and running. The small practicalities were a challenge actually."</i></p>
THE IMPLEMENTATION IS DONE INEFFICIENTLY	<ul style="list-style-type: none"> Design thinking is occasionally treated as subsidiary by the senior management Lack of implementation in development activities The partly different objectives of the design organization and the business organizations <p><i>"Sometimes I feel that [customer centricity in the company's management discourse] has been compromised by... it's not the first priority because the first priority is profit."</i></p>

4.3 Mike – the design professional



MIKE, 29

What do they like?
When non-designers succeed at utilizing design tools.

And dislike?
The fact that sometimes people want the solutions done by designers unrealistically fast.

What keeps them busy?
Building the materials for the internal design thinking school so that people could learn better.

What's their biggest fear?
That people ignore their efforts with the llearning environments.

Mike is one of the most experienced design advocates in the entire company, having worked with several business units, teams, and projects over the years. His factual position is in the proprietary design team although he daily jumps across the organization to advise teams and individuals on decision-making, through the tools of design thinking. This means activities such as helping product development teams to research and define their users' actual needs all the way to coaching project managers regarding design workshops.

Mike has seen it from the beginning. It all dates to 2014-2015 when the proprietary design team was formed. After the external design expertise purchases began accelerating, it was time to establish a design team *in-house*. Mike notes that this move was essential in the design transformation's early days, especially since the people in the team were remarkably talented. The team, despite being still quite small relative to the company's large size, has been able to make an impact on how problems are solved nowadays, Mike argues.

In a larger perspective, the focus on the customer and their experience is relatively new in the company. Mike believes that previously the company was not able to recognize the rising role of the customer in the energy industry due to its stable and predictable business environment. He calls this an "utility mentality", a state where the focus is on the energy-producing assets, not the customers. This mentality – or a historical burden – is something that

Mike can still recognize in some parts of the organization, preventing the customer-oriented ways of design thinking.

Today however, design thinking is starting to be the go-to problem solving method in the organization, Mike argues. It all comes down to *doing*. By bringing design thinking into one project at a time and by that slowly creating the awareness and trust in its capability to create value. Mike believes that essential to applying design thinking organization-wide is to have small moments of success that will feed the positive spiral. Mike recalls a lot of these small moments – they could happen in service design workshops or in other events where single elements of design thinking are included in development projects. That's where non-designers experience the usefulness of design firsthand and learn more about the methods. It is no exception that later some of these non-designers start slowly applying those tools on their own.

That's where Mike sees some of the thresholds preventing the wider adoption of design thinking: general lack of design competence and sometimes also individual-level resistance. For example, in some development processes, the implementation phase lacks behind, causing development to slow down. Regarding resistance, in some situations, Mike hears complaints that the different phases of a design process take excessive amounts of time or simply face stances such as “we want to do this our way, not your way”. It is also common that Mike's clients want solutions unrealistically fast. As Mike points out: “Sometimes people come to you, and they say they want the solution by the end of the week. But wait, I must go through the *why* and for *whom*”.

Mike has recognized that especially representatives of the middle management in the organization play a crucial role in the design transformation as their policies can both promote and prevent wider adoption of design thinking. When it comes to preventing practices, leaders who question the time spent on design activities may slow down the progress some individual employees have achieved. This might be due to demanding responsibilities for results these managers face, Mike believes. On the other hand, some middle managers do let employees use time for the several phases of the design process and others, even some

in upper management keep asking questions that guide the employee to customer-driven actions. This is what Mike tells us:

“What I noticed in top management, or their actions was that when discussing with them, they always asked how many clients I have interviewed etc. In a way, they started steering our actions with these customer-oriented questions – making people realize that they need to understand the customers.”

As a matter of fact, Mike sees the interaction and mutual communication between the design team and other parts of the organization essential in successfully bringing design thinking to the whole organization. He highlights those actions as simple as building trust can't be overlooked. Mike compares some of the attempts to convince people, to selling. Mike jokes that in order to convince a key person about design thinking, you need to have a full sales deck with you – simply because people are often too busy to read about the benefits of design thinking on intranet or similar sources.

To address this, the design team is planning to set up a direct communication channel between the design team and the ones needing designerly help. Besides that, it has proven to be a helpful practice to produce e-learning material for the company's internal use. These include a “DT Guide” (Playbook) that showcases the different methods from the design thinking toolbox and a “Design School” (Design Thinking Academy) which has extensive video material for online learning. Even though the feedback has been good, Mike wonders why these materials aren't getting as much traction as the design team hoped for. He sees it extremely valuable to boost not just individual but also collective learning because as of now, no collective learning database is formed. This causes teams to learn the same things repeatedly in different situations.

Mike also underlines that the design team has had to learn the nuances regarding how to co-operate with the business teams that work with different goals than the design team itself. Teams in the business areas are understandably focused in meeting their business goals

and on the other hand, the design team is focused on solving problems and laying foundations on customer-centricity. At times, this cross-purpose causes challenges – starting from the fact that sometimes the working practices between the teams are too divergent. Here Mike points out that the design team itself is constantly trying to act more and more customer-oriented, e.g., trying to understand how and when their expertise is most preferably offered – so that their help internally would be perceived better.

The design team itself consists of people from many countries, and accordingly, works with people and teams internationally. Interestingly, Mike thinks that design thinking acts as a combining bridge between the design team members akin to a common language. The common methodology is helpful in binding the team together no matter where the employee is from, especially in current times where people work physically far away from each other. Thus, the practice of always referring to the design methodology inside the team seems to unite the team regardless of their backgrounds.

ENABLING PRACTICES ACCORDING TO MIKE

PRACTICE	DESCRIPTIVE ACTIONS AND DIRECT QUOTES
USING ELEMENTS OF DESIGN THINKING IN PROJECT WORK	<ul style="list-style-type: none"> • Bringing design thinking into individual projects • Changing the mindset one project at a time • Including single elements of design thinking into projects • Permission to spend time on the steps required by design methods • Adopting by doing • Moments of success feeding a positive spiral <p><i>"I plan and direct projects where there are currently bottlenecks or problems or opportunities in the projects using design thinking: what we could do for that management level, what we could do about it in the product management model or at the team level."</i></p> <p><i>"Perhaps more important have been the moments of success in some projects where some design thinking principles have been applied and then the success has been accompanied by a spiral of positivity and people spreading the word."</i></p> <p><i>"[Having the permission and time to use design methods properly] just made me realize that it's something worth fighting for. Worth propagating in the company and, you know, saying to someone, "no we are not doing this your way. We have the process for that."</i></p>
TRAINING AND EDUCATING BOTH INTERNAL DESIGN TEAM AND THE REGULAR EMPLOYEES	<ul style="list-style-type: none"> • Building the competence of the internal design team • Using design as an element in leadership training • Organizing workshops and training on design thinking • Building learning material for internal use • Having the permission to spend time creating internal design tools • Utilizing the expertise of an external company in creating learning environments • Reaching the "critical mass" through awareness and knowledge <p><i>"Our first design leader was able to set up an excellent expert pool and through it, design began to appear in the house. This was a very important part of it."</i></p> <p><i>"We have created a playbook that is on our Intranet. We have selected and listed design thinking methods and we have added the instructions how to use them, descriptions and some use cases even so that people will be more encouraged, or they go through and they can look at the method and utilize it themselves."</i></p> <p><i>"It is no longer a new phenomenon, it's becoming the basic way of working for many people, and, when new people come to work for us, they already have it. We have trained our people, so the awareness has reached such a critical mass that it begins to sink."</i></p>
MANAGERS ASKING THE NUMBER OF CLIENTS INTERVIEWED	<ul style="list-style-type: none"> • Management asking questions that guide to customer orientation • Changing middle management practices <p><i>"What I noticed in top management, or their actions was that when discussing with them, they always asked how many clients I have interviewed etc. In a way, they started steering our actions with these customer-oriented questions – making us realize that we need to understand the customers."</i></p> <p><i>"It starts with routines and other things like that so then it takes a long time. And organizing that is important, especially changing the middle management practices."</i></p>



<p>INCREASING AWARENESS BY SETTING VISUAL ARTIFACTS</p>	<ul style="list-style-type: none"> • Displaying design-themed posters in corridors • Making things visible in the physical office environment <p><i>"Back then in 2014-2015 when design thinking was made a priority, we started seeing posters everywhere."</i></p> <p><i>"Bringing things to the aisles and elsewhere, for example showcasing that Design Lab was founded somewhere and things are done a little more visibly... creating visibility there in an organization, it's the most important thing in transformation."</i></p>
<p>INCREASING AWARENESS BY SETTING VISUAL ARTIFACTS</p>	<ul style="list-style-type: none"> • "Selling" design thinking internally to business departments • Establishing a direct communication channel between design team and businesspeople <p><i>"For example, I have attempted to sell our design team to one of our business units, little by little. It is important to know how to and be able to sell our services."</i></p> <p><i>"It is safe to attempt that the people in the business management do not know anything about design. Then you just take a sales deck and start going through the things they could need today."</i></p> <p><i>"It requires that business teams perceive the [design] team and its manners valuable and trust them. The only way is to win their trust because that mandate can't be given by anyone unless there's a decision-maker in the business who wants it regardless."</i></p>

DISABLING PRACTICES ACCORDING TO MIKE

PRACTICE	DESCRIPTIVE ACTIONS AND DIRECT QUOTES
<p>UTILITY PRACTICES – TREATING THE CUSTOMER AS SECONDARY</p>	<ul style="list-style-type: none"> • Inability to recognize the rising role of the customer in the energy industry • Previously no need to change due to stable and predictable business environment <p><i>"The rise of the role of customer service in the energy sector as well, it may have gone a little unnoticed because there has been that kind of "no need to change" thinking and then suddenly we should start to change."</i></p> <p><i>"Historically there hasn't been much centrally directed activities and now design has been brought there centrally directed."</i></p>
<p>INDIVIDUALS RESISTING CHANGE</p>	<ul style="list-style-type: none"> • Some individuals still applying non-customer-centric thinking • Resistance to change among some business units • People in the business unit not always understanding the value of DT <p><i>"Maybe they don't see what they could get out of it, because why would I use it? I know how to do my job, right? There is no advantage to it. It's difficult to promote such things because all projects are a little different than people may think these methods don't apply to them."</i></p>
<p>FRAGMENTED WORKING ACROSS THE ORGANIZATION</p>	<ul style="list-style-type: none"> • Organization is decentralized and design is now being brought in centralized ways • Lack of collective learning, having to learn same things again elsewhere • Lacking continuous interaction between design team and business units <p><i>"It often comes up that the same lessons have to be learned over and over again. There is not such a thing as a learning database that could be forming."</i></p> <p><i>"[In projects] there is just no time for the phases of you know the discovery and stuff like that, for brainstorming and you just you have to deliver a solution fast. You don't have the time to test it."</i></p> <p><i>"What I think is missing is the kind of continuous interaction between our business development areas and the design team."</i></p>

4.4 Inge – the businessperson



Inge observes DT from the business unit perspective. She works at one of the business divisions of the organization and time to time engages with design thinking or the design team. While not being a professional designer in any means, Inge has studied service design outside of her work at the open university. For her, design is no longer a separate process but rather a default task carried every day.

Design thinking in her own work is particularly evident in the fact that she knows how to ignore her own initial thoughts and assumptions about what is good for the client. The reason for this is that for a customer to use a product developed by Inge's team, she believes she needs to understand the customer's experience and thus create the solutions as accurately as possible. Inge tells a descriptive example from the development phase of a new product that her team was about to launch. Her team was in the early stages of development with a product that would help the maintenance personnel to do their operations more efficiently at the security environments of the power plants. The initial thought of Inge's team was to create a whole new gadget for the maintenance personnel to use in the field. However, as Inge engaged with the potential end users, she quickly found out that there is no need for an additional physical gadget as it would only add to the complexity of their work. Instead, the staff wanted as few additional tools as possible. Then the development team found out that the most convenient and user-friendly solution could be found in the workers' pockets – they would gladly use the

existing smartphones for the solution. Then the development continued in the form of a new mobile app to be used with the personnel's existing mobile phones. The concept design also included quick user feedback loops and workshops were utilized with various stakeholders.

In internal operations, studying design has changed Inge's thinking so that she applies the people-oriented ways of thinking, for example, in the most essential ways of working or leadership. In her mind, Inge shapes a dichotomy between traditional management and design thinking, as they appear to her as opposites. An important part of the change in thinking has also been rapid experimentation in internal work – today it is easy for Inge to start testing products and their prototypes in the early stages of development. Another important feature of design thinking for Inge is that it provides a set of ready-made processes that improve efficiency in development projects.

Interestingly, Inge points out that for her, design thinking seems to be like “rational thinking” which she has tried to apply in her own work even before – and now she has gained confirmation of that thinking through her design studies. Regarding this, Inge worries that at times design thinking is seen as of absolute value, not of instrumental value. This means that sometimes DT is used just for the sake of using DT. Nevertheless, from the company's design department Inge has received valuable best practices, for example in development processes. In addition, the design team provides visual support, e.g., with refining reports and white papers.

One of the biggest challenges regarding wider utilization of design is that buying design expertise internally is also relatively expensive. To tackle this, Inge wonders if design thinking could be trained as part of the employee orientation process so that the tools can be made more effective to support their own work as well. In the current times of remote working, the challenge has also been that the previously highly meaningful design workshops do not work as well virtually as they did physically.

Akin to Mike, Inge has also come across old practices in the organization based on traditional product-process orientation. Sometimes, according to Inge's experience, a strong hierarchy of the organization is an obstacle to operating methods - it is difficult for an individual to bring about real change.

ENABLING PRACTICES ACCORDING TO INGE

PRACTICE	DESCRIPTIVE ACTIONS AND DIRECT QUOTES
STUDYING DESIGN KNOWLEDGE OUTSIDE WORK	<ul style="list-style-type: none"> Studying design courses outside work <p><i>"I did twenty-five credits at the summer university in 2019, basic studies in service design."</i></p>
ACTIVELY INCLUDING DESIGN TOOLS IN EVERYDAY WORK	<ul style="list-style-type: none"> Thinking through user profiles in everyday work Ensuring the consistent visual identity in mundane activities Doing quick testing in the development processes Organizing design workshops <p><i>"We have a relaxed way of doing things in the sense [...] we no longer needlessly cringe at it in theory for a long time, but we rather do experiments."</i></p> <p><i>"We conducted a design thinking workshop at the beginning of the year, or, in fact, the design leader Martine did it. There was a bigger group of us, and it was a really meaningful thing to do."</i></p>
TAKING PART IN INTERNAL ACTIVITIES THAT PROMOTE DESIGN	<ul style="list-style-type: none"> Taking part in activities such as competitions and questionnaires in internal channels <p><i>"There have been various races in Yammer and then some lotteries [...] People are aware."</i></p>

DISABLING PRACTICES ACCORDING TO INGE

PRACTICE	DESCRIPTIVE ACTIONS AND DIRECT QUOTES
PRIORITISING SHORT-TERM PROFITS AT THE EXPENSE OF PROPER DESIGN PROCESS	<ul style="list-style-type: none"> Habit of doing things in a hurry No permission to use time with design thinking processes <p><i>"Maybe it [the fact that things get done in a hurry] has been that challenge this year. When you haven't been able to be physically present, working is kind of fragmented."</i></p> <p><i>"Frankly, I am not allowed to put time into it [to apply the design]."</i></p>
INABILITY TO FOLLOW OTHER UNITS' ACTIVITIES	<ul style="list-style-type: none"> Having restricted range of vision to other units (partly due to remote work) <p><i>"Also with this distant working, there has been such a lower visibility to the functions of other units."</i></p>
THINKING AND ACTING IN NON-DESIGNERLY WAYS	<ul style="list-style-type: none"> Simply lacking awareness of DT Practice of thinking "in an engineering way", first about the product and only then the user <p><i>"The thinking here often goes in an engineering way; there is a process where we need to find the solutions. This way of thinking tends to think of the technical side and building first and only then the users."</i></p>
FINAL SOLUTIONS ARE IMPLEMENTED POORLY	<ul style="list-style-type: none"> Implementing the final solutions poorly Design thinking doesn't always have big impact on the outcome <p><i>"But then there's still the question on how then the final solution is really going to be implemented. Maybe that knowledge is still lacking."</i></p> <p><i>"Here, I think [the application of design thinking] is a bit of like yeah, it's fun, but it doesn't have much effect on the outcome."</i></p>



CONCLUSION & DISCUSSION

5.1 Summary of the findings

The aim of this dissertation was to examine practices that enable or disable the implementation of design thinking in an organization. I chose narrative study as my research method so that I could create a rich description of the reality that prevails within one company. As a special approach in the study, I applied a practice theory lens, which directed the research interest to the practices of the participants in their everyday work activities. One of the key presumptions of the study was that the ongoing change can be assessed through reviewing the practices that take place between organizational actors. The research data was produced through eight thematic interviews. Rather than seeking broadly generalizable knowledge, the thematic interviews provided the study with a wealth of rich, contextual understanding. It was natural to present these types of results, some of which even contain conflicting findings, through narrative writing. Through the narrative way of expression, the reader can immerse themselves in stories describing the organization's reality.

The company is undergoing a design transformation which means that it is adopting some of the elements of design in many processes related to product and service development, innovation, and organizational learning. Indeed, speaking of the results, each respondent type approaches the transformation process a little differently. The participants in a leadership position of the design team highlighted practices that are related to organization-wide learning and practical design skills, legitimizing the value of design, and promoting design as a business priority with upper management. The top enabling practice mentioned by design leaders is increasing the general awareness of design through practical first-hand learning in projects. The biggest disabling practices highlighted by design leaders are limited resources provided to the design team as well as inability to demonstrate the business value of design.

Interviews with the members of the design team brought up slightly different angles. The design professionals also emphasized practices such as adopting by doing, training of employees and the ability to overcome the prevailing "utility practices" (meaning that previously, the customers have not been taken into account largely) as critical breaking points for

the adoption of design. While design leaders highlighted the importance of legitimization of design vertically in the organization, the design professionals described the importance of horizontal influencing. In their everyday activities, the designers engage with people from several business areas and that leads to their notion of the biggest disabling practice: the too divergent ways of working between them and the business unit employees. According to the design professionals, one of the most important enabling practices has been that management representatives actively allow, encourage and challenge teams to think in the designerly way.

Finally, the people from the business units of our case organization gave insights from the perspective of utilizing DT in actual business and product development. They highlighted the importance of learning by doing, by which they referred to countless design workshops they have conducted. For them, adopting DT has been fostered by good interaction with the designer team and then engaging with the tools in their own work. On the contrary, in this category of respondents, the prevailing stances for more traditional ways of thinking and the limited time to be dedicated to the design process were highlighted as the most common disabling practices.

ENABLING PRACTICES – a summary table on how design is adopted

MARTINE	MIKE	INGE
Buying design expertise from outside of the organization	Training and educating both internal design team and the regular employees	Studying design outside work
Initiating small, pioneer design projects	Including single elements of design thinking into projects	Actively including design tools in everyday work
Organizing design workshops	Using design tools in project work	Using design tools (e.g., user profiles)
Design coaching in projects	Organizing workshops and training on design thinking	Asking for help from the designer team
Using design methods in internal hackathons	Building learning material for internal use	Taking part in internal activities that promote design
Integrating design terminology with business terminology in strategy documents and on website	Increasing awareness by setting visual artifacts such as posters across the office facilities	Thinking through design methods, such as user profiles in everyday work

DISABLING PRACTICES – a summary table on what prohibits design adoption

MARTINE	MIKE	INGE
Inability to support the business units due to inadequate resources	Utility practices – treating the customer as secondary	Thinking and acting in non-designerly ways: product first, user second
Prioritizing short-term profits at the expense of proper design process	Lack of collective learning, having to learn same things again elsewhere	Prioritizing short-term profits at the expense of proper design process
Quasi-use of design tools	Some individuals applying non-customer-centric thinking	Getting encouraged to use design but not allowed to use time to do it properly
Design activities are conducted in poor facilities and with unreliable tools	Lacking continuous interaction channel between design team and business units	Online workshop environments produce un-immersive experiences
The implementation phase is done inefficiently	Fragmented working across the organization	Final solutions are implemented poorly

5.2 Conclusions in relation with the earlier literature

My thesis offers three key contributions to the organization and management research. First, this study advances the research on how individual companies adopt DT in their organization. Also, while the research activity on DT in the organizational context has increased, practice theory is rarely applied in the existing literature. Therefore, my study contributes to the previous research by utilizing practice lens with the special focus on activities and doings in the organization. Second, my thesis enriches the scholarly discussion with a narrative approach, by deeply examining one organization on its journey on adopting DT. Narrative studies about companies engaging with DT and the transformation journeys related to it are relatively scarce. Third, studies involving the use of DT in the energy industry have been practically nonexistent. My thesis opens a new kind of window to the energy and utility sector and interestingly shows how DT has plenty of industry-specific application possibilities.

How do the findings of my study link to the earlier literature around the topic? As noted, regarding the adoption of DT in the organization, it has previously been identified that a wide range of efforts regarding internal communication and legitimization, creation of physical

spaces and sharing of internal success stories are crucial (Rauth, 2014). Also, the importance of clear management communication and autonomy of the design function as well as modification of organizational processes has been identified (Micheli et al., 2018). Co-existence of both deep and wide design expertise as a key to adoption has also been suggested (Björklund et al., 2020). Quite interestingly, many of the findings in this research reinforce the findings discovered by Rauth (2014), seven years earlier. In fact, all five types of efforts Rauth (2014) suggested, were somehow present in the results: demonstrating the value of design with first external and then internal success stories, fitting DT to company-specific context, convincing people through first-hand experiences, creation of ambassador networks inside the company and creating physical spaces and related artefacts to foster the application of design tools.

In my case organization, demonstrating the usefulness of DT is done by making DT related learning material with case study examples as well as organizing design workshops e.g., as a part of leadership training. Meshing DT with organizational culture is done, for example, by using DT methodology as part of their regularly organized internal innovation events. Convincing through experience is something that is done by the practice of first educating about the DT methods and then encouraging people to utilize those themselves. The creation of physical spaces and artifacts is embraced by the action of putting up DT related posters in corridors as well as utilizing workshop rooms (also using virtual environments such as Miro due to remote working). Finally, the creation of ambassador networks was described to happen by the practices of some people selling and convincing key decision-makers around the organization.

Björklund et al. (2020) described the common pitfalls that large organizations face when adopting DT. The first pitfall was “Boxing in Design with Ineffective Cross-Functional Collaboration”, meaning that design expertise would be closed in a team that is not accessible or cannot well access other parts of the organization. This notion does not play a big role in my research data. Even though the design team has sought its place within the organization, comments regarding how accessible the team is, were mostly positive. In terms of ineffectiveness however, the notion that the design team and business teams sometimes have different objectives was present in the results. And as Björklund argues, the importance and occasional

difficulty of horizontal selling of DT internally showed up in my research data. The mentions of selling design in my data point to the need of having the shared language with managers (such as speaking about revenue growth and return on investment) so they better understand the business value. This is exactly what was previously discovered by Carr (2010).

The second common pitfall presented by Björklund was “Decontextualized Information Resulting in Unactionable Design Thinking” meaning that there would be disconnection between DT training and action. While some of the interviewed people described how non-designers sometimes hesitate the first independent actions with DT, this notion was not widely noted in my data. This pitfall was however touched on the notion of a member of the design team: “we lack the skills around implementation”. While having effective skills with the first phases of the DT process such as ideation and user research, the concepts developed in later phases often tend to get unmaterialized.

The third common pitfall discovered by Björklund was “Fragmented Design Efforts Lacking a Shared Framework”, meaning that the design efforts are sparse and uncontrolled. This notion did appear in my research data, when a design professional stated that people must learn the same things again and again as there is no shared learning. On the other hand, my research data suggests the design team is actively seeking to build up a shared DT framework in the form of a digital learning environment for internal use. Another effort for closing the bridge between the designers and business units is the intention of setting up a direct communication channel between these two groups.

In line with Seifried (2019), some of the interview participants in my study also highlighted the importance of physical spaces in the adoption of DT. It was noted that lacking proper collaboration spaces has been a problem and it negatively affects the workshop activities of the organization. In contrast with Seifried’s observations focusing mainly on physical spaces, the research data showed the importance that non-physical working environments play, such as the online collaboration platform Miro and regular video conferencing tools.

Finally, comparing my results with the previous case study on organizational design capability in a Finnish processing industry company Metso (Mutanen, 2008) provides a few interesting observations. One of the key conclusions in that case was that organizational design capabilities take years to form, and the design expertise brought from outside will slowly blend or mix with the industry-specific needs (in that case, engineering practices). This similar blending process seems to be going on in my case organization as well, where designers learn the special features of the energy sector. And traditional engineering practices get blended with design methodologies. However, in the case of Metso, the design expertise started to gain in popularity starting specifically from the *industrial* designers whereas in the case of mine, the first contributions seem to have come from the *service* designers. As Mutanen (2008) describes, Metso transitioned from the “expert-centered to the tool-centered, and further to process and strategy-centered” users of design. In these terms, the transformation in my case organization has been from expert-centered to strategy-centered and after that, to process-centered, assessing by the interview data.

5.3 Reflections on the research process

This master’s thesis process has been one of the best learning processes of my university studies. First and foremost, it is a great test for self-leadership skills as the research process is conducted mostly alone and requires planning and patience that widely extends the typical setting of a regular coursework. Familiarizing myself with over 100 articles itself has taught me several lessons about what is meaningful in management and organizational research and also how academic English is used properly. That then translates to the lessons of academic writing, as this dissertation is also my longest text written in a foreign language. Speaking of writing, the narrative presentation format chosen for the results of this study proved a good way to present the results produced with three different participant types, even if some of the results came out conflicting with each other.

When it comes to reflecting the whole research process starting from January 2021 and coming to an end in December 2021, I might start with the notion of a jumping progress.

The research proceeded in short but effective sprints where I fully focused on the research for several consecutive days. Then there were longer breaks when I merely processed the research in my head. Looking from the closing days of the process, I can say that both types of progress were needed. In case I had done the whole research process in a matter of 1-2 months, the learning outcomes wouldn’t have been as wide as they have now been. And coming back to the interview data, for example, after two months of break was extremely helpful – by doing that I was able to look at the interview data with completely fresh thoughts and I could let go of some pre-guiding thoughts.

One of my key learnings is that the ability to conduct interviews is crucial to this type of case study research. Such subtleties as not rushing for the follow-up question too fast can have a big impact on the way the interview unfolds. Listening to the interview recordings were a practice for catching the possible results but also a practice for improving the sheer interviewing skill. When it comes to familiarizing with the interview data, during the research process I came up with some innovative ways, such as listening to the interview data intentionally before falling to sleep. Many lessons were learned also when handling and analyzing interview data produced in two different languages.

Learning more profoundly about the substance concepts, in this case about design thinking and organizational transformations was highly rewarding. Immersing oneself with such a large number of scientific articles gives a good base understanding for the future. Interviewing eight people working on these issues provided an interesting window to learn how these phenomena materialize and affect organizations. Indeed, the whole concept of an organizational transformation came from one of the interviewed participants and led me to learn more about the topic.

What could have been done better? A lot! Unfortunately, I was not able to examine the organization to the widest definition of practice research which also considers the embodied and spatial dimensions of organizational actors and acting. If I started the research process again, I would go and observe at least some of the organization’s physical spaces myself. I assume that would have provided me with some information that I was unable to

get through interview data. Also, the amount of people interviewed is relatively low and in order to increase the validity of the results, I should have gathered more participants from other parts of the organization. Still, it must be recognized that typical to the nature of qualitative research is that the findings are not generalizable. Rather, they are constructed realities of the research data that the researcher together with their own background and pre-existing assumptions were able to gather in a restricted amount of time. As always, the results of qualitative case studies need to be taken with a grain of salt.

To conclude, this master's thesis has made me a lot better as a researcher. The next study would be a lot easier to start, maintain and finish. One key learning concerning the pace of the research is to find a relevant root source of academic research as soon as possible, rather than dig the information from sparse places. That root source can save the researcher several dozen hours of information research. Still, maybe the most important learning for me is that doing scientific research is not overwhelmingly hard – it's quite doable actually! And the process can be extremely enjoyable to the researcher if the topic and research setting are carefully chosen.

5.4 Suggestions for future research

Finally, it is time to give thoughts and ideas to future research topics surrounding the theme. First, after extensively examining previous research, it is evident that the utilization of design thinking in the energy and utility sector is widely unexplored. This could be due to the fact that customer-centered thinking in a broader perspective, at least according to this study, is relatively new in the energy sector. The lack of studies in this industry could also be simply due to lower design maturity levels in energy and utility companies. As such, it would be interesting to know what might be the thresholds that prohibit wider utilization of DT in the sector. The general conditions of this specific industry are fruitful for DT related activities as the energy sector today is challenged by regulatory and climate-related pressures. As a result, the industry needs to innovate and understand the changing customer preferences.

Also, the limited number of case studies following single organizations on their design transformation journeys is surprising. In this branch of research, there is plenty of room for new case studies to examine how companies adopt DT in different industries. After all, my study presented just a quick snapshot on the reality of a design transformation, and it was still able to provide some interesting findings. A longer study, including research methods other than just interviews (such as field observation, quantitative methods) could potentially provide even more interesting findings. Transformations as such do not happen overnight or even during a course of a year but rather take many years, especially in larger organizations. That's why it might be fruitful to follow a single company for a longer period of time in order to recognize more working practices and pitfalls on the other hand.

The rapid escalation of remote working due to Covid-19 pandemic provides another interesting research setting; how is the adoption of DT fostered in hybrid and online working environments that seem to get increasingly common. DT has traditionally involved a lot of workshops and such activities that are held physically in common spaces. Presumably the practitioner side of designers would be interested in knowing what kind of practices enable good collaboration in online environments.

The business value of design is something that even after countless studies still needs more research. I suggest that the economic value of DT could be researched in more industry-specific contexts, such as solely in the energy sector. As my research shows, design practitioners need to use extensive amounts of time in legitimizing design and explaining its value to get the message through in their organization. This indicates that the value of DT needs to be shown in more field-driven samples that could be easily translatable to practitioner use. To achieve this, the research on DT's advancements could focus on even smaller "effect units", such as how DT brings value to new service ideation workshops or how much it reduces the time customers take to develop emotional connections to product brands.

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7. ANNEXES

Annex: The interview set

Theme 1: Participant's background

- Please tell me briefly about yourself, your background
- What you do you do at Company X?

Theme 2: The role of design in participant's own work

- Talking about your own work at Company X, what do you think is the role of design / design thinking in your own work? Follow-up question: Can you tell me more about how important it is?
- What is particularly good about design thinking? Why?
- How could design be further developed as part of your work Why?
- How else could or should you use design in your work? Why?
- What kinds of tools and facilities or something else you use to apply design thinking?

Theme 3: The change of the role of design change in participant's own work

- How has the role of design in your work changed? Why so?
- Do you remember some events when you experienced that now design is involved?
- Do you remember some people who were involved?
- How did things start? Follow-up question: what happened then?
- What do you think about the development that has taken place?
- What has been particularly good about it? Why?
- What do you think could have gone even better in retrospect? Why would this have been important?
- How could the role of design be strengthened in relation to your own work and area of responsibility?

Theme 4: The role of design at Company X as a whole

- What do you think is the role of design in Company X's operations?
Follow-up question: Do you tell us more about how you think it brings a [described] advantage? How was it then?
- Does it have any other role?

Theme 5: Design change at Company X

- How has the role of design changed at Company X?
- What has caused the change in the role of design?
- How did things go?
- Do you remember any events?
- Do you remember any routines?
- Do you remember any people?
- What happened then?
- What went particularly well? (Can you give an example of a successful and a failed case? Why didn't you succeed as well as you could have?)
- Do you identify anything else that could have contributed to the change in the role of design?